

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- ✓• BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

Figure 1

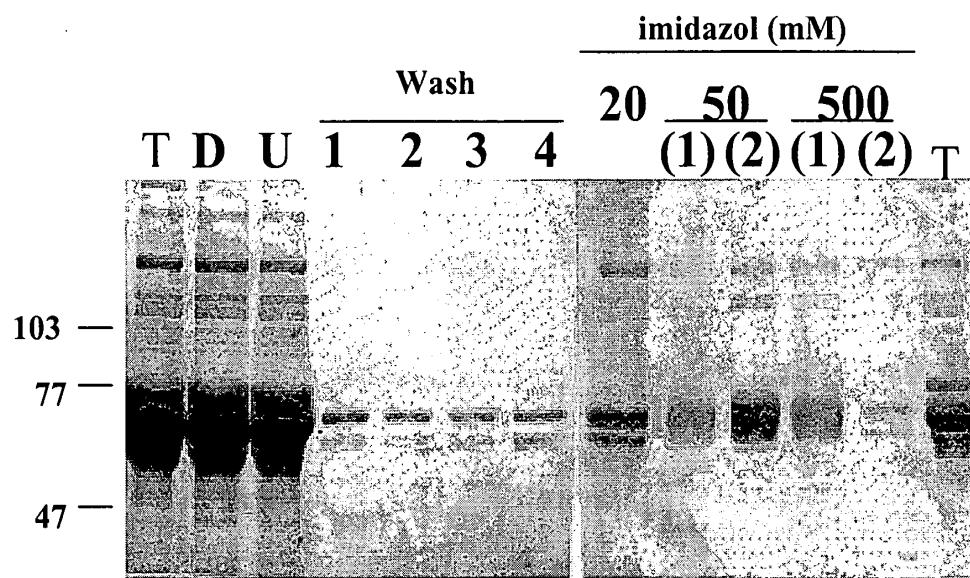


Figure 2

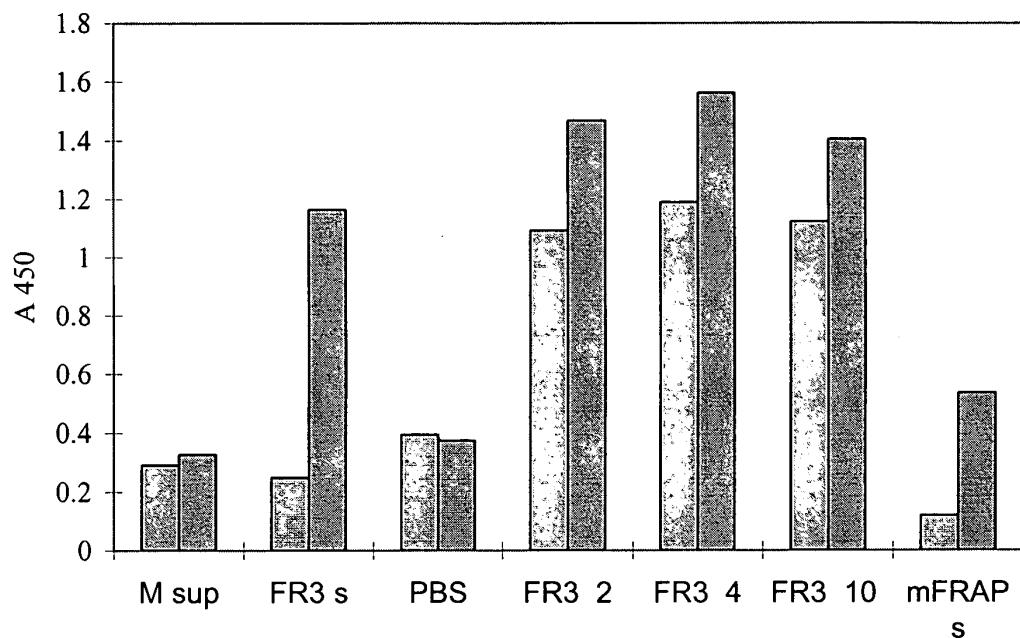


Figure 3

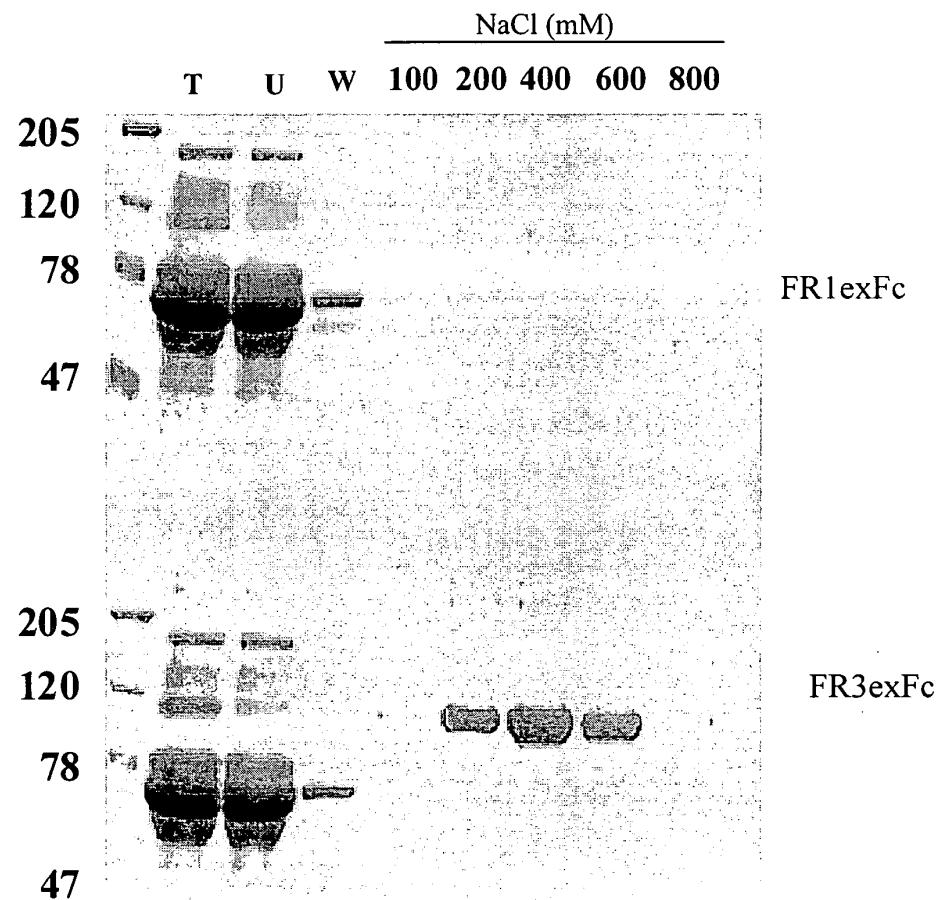


Figure 4

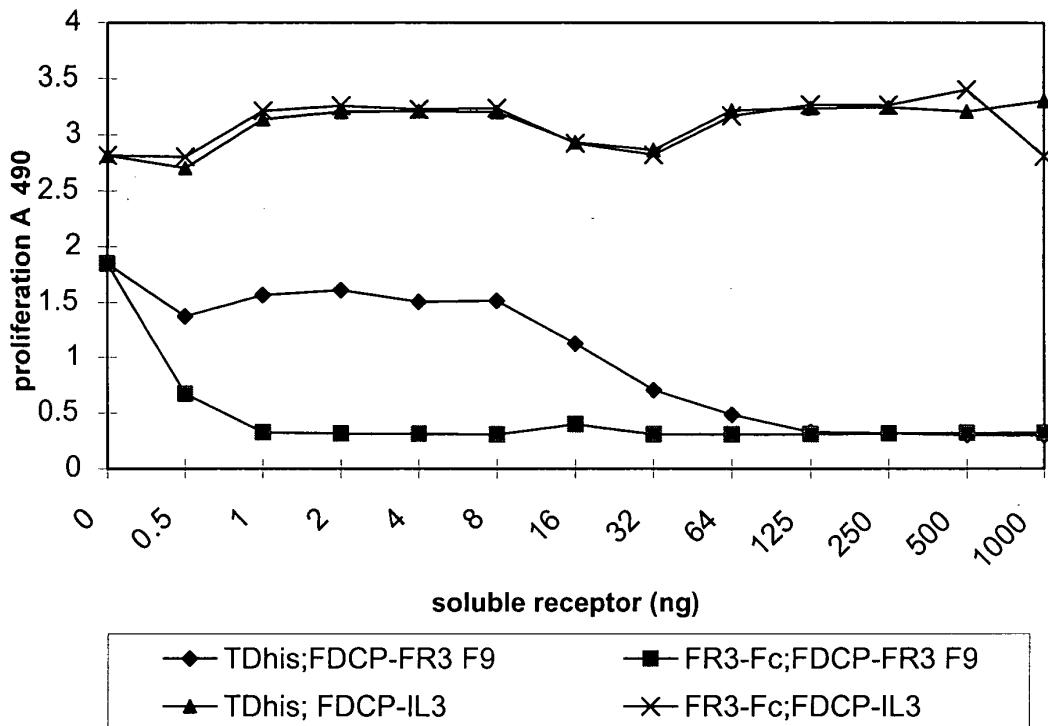


Figure 5

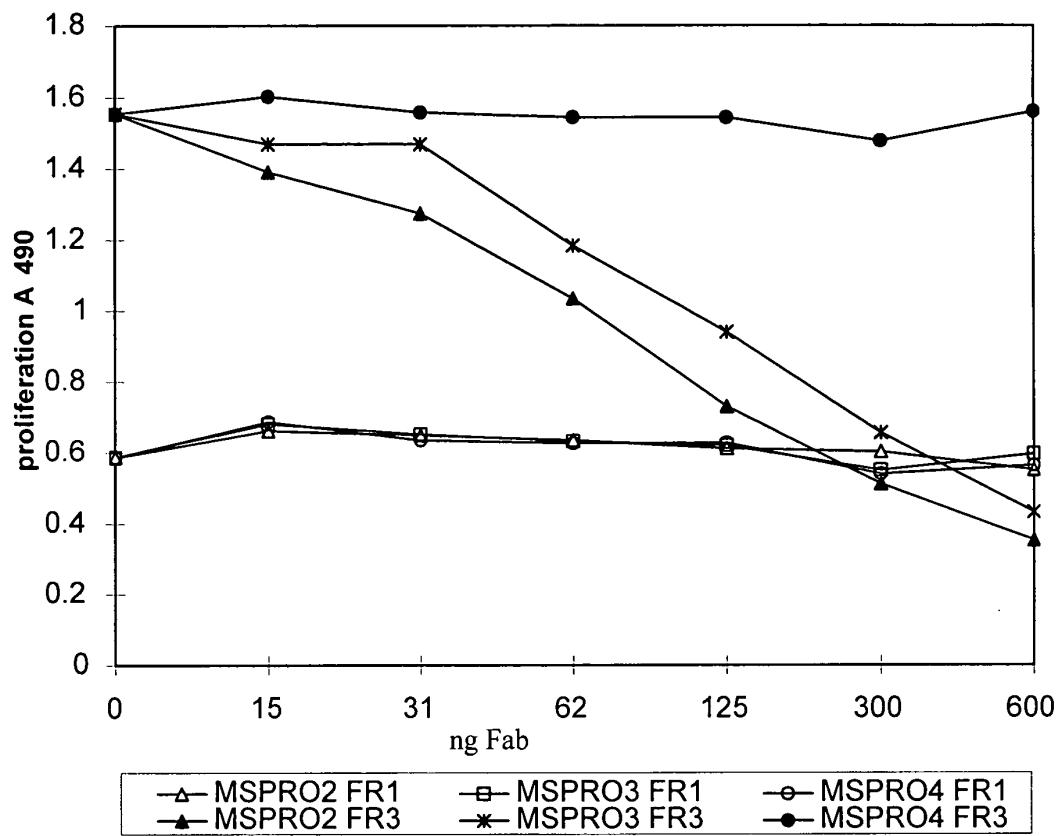


Figure 6

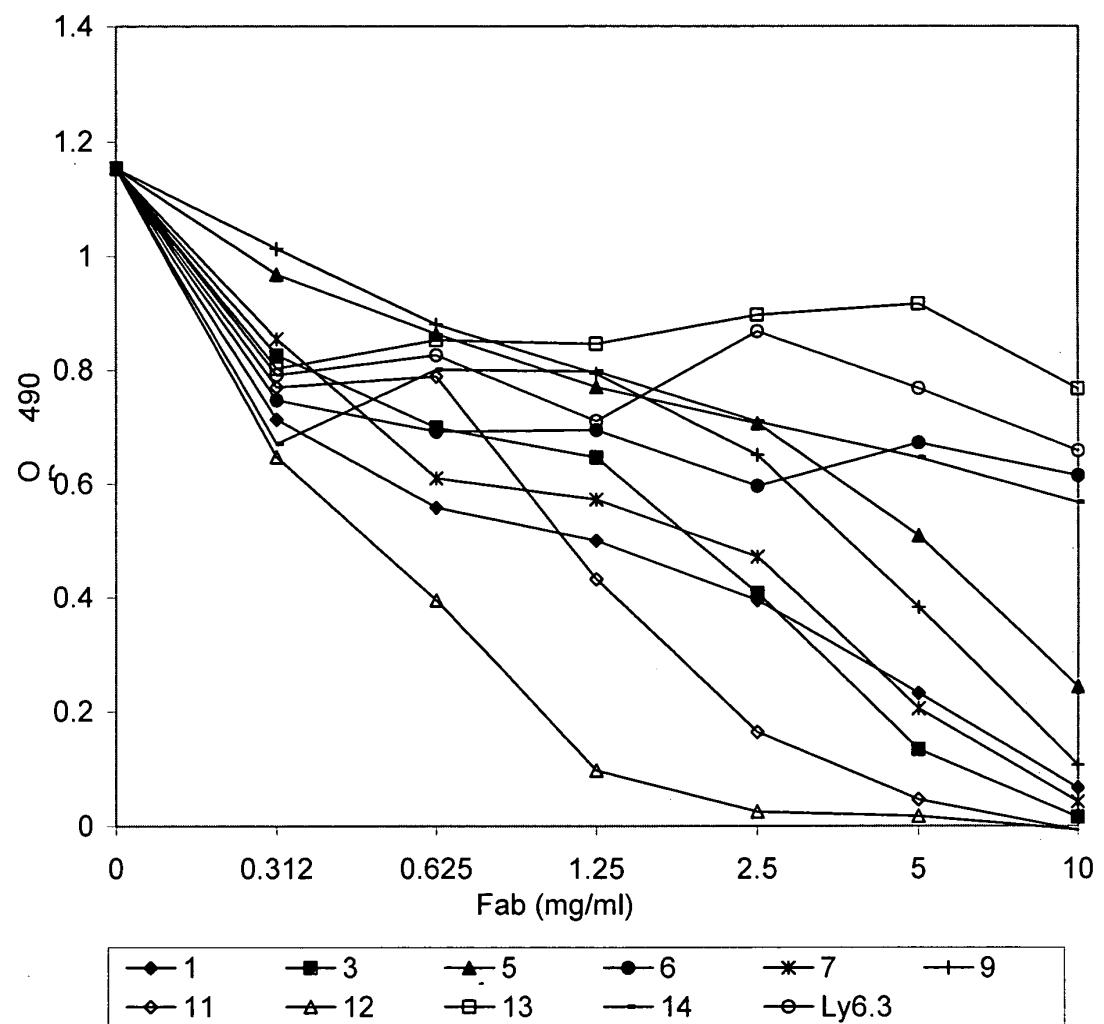


Figure 7A

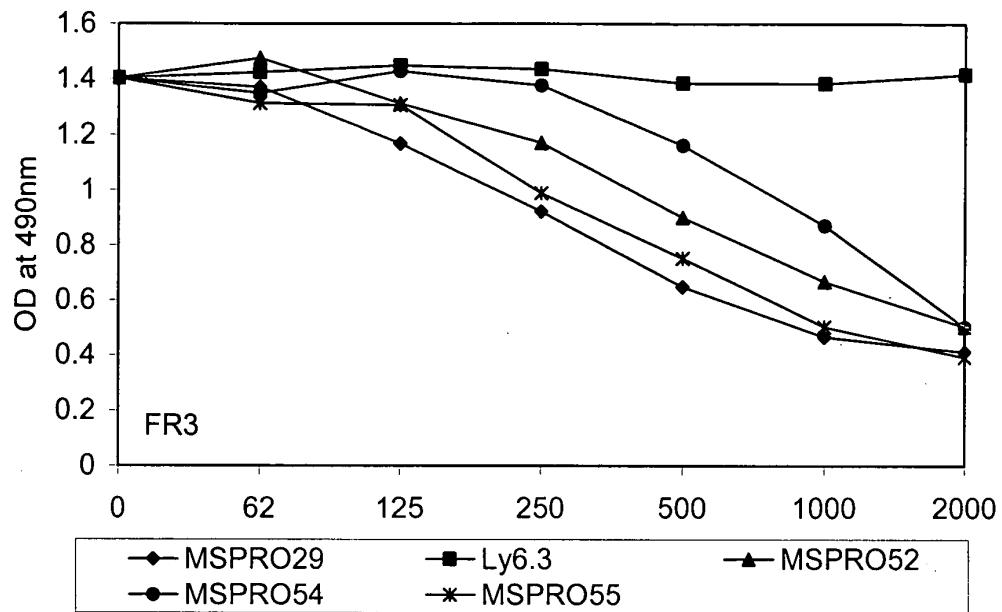


Figure 7B

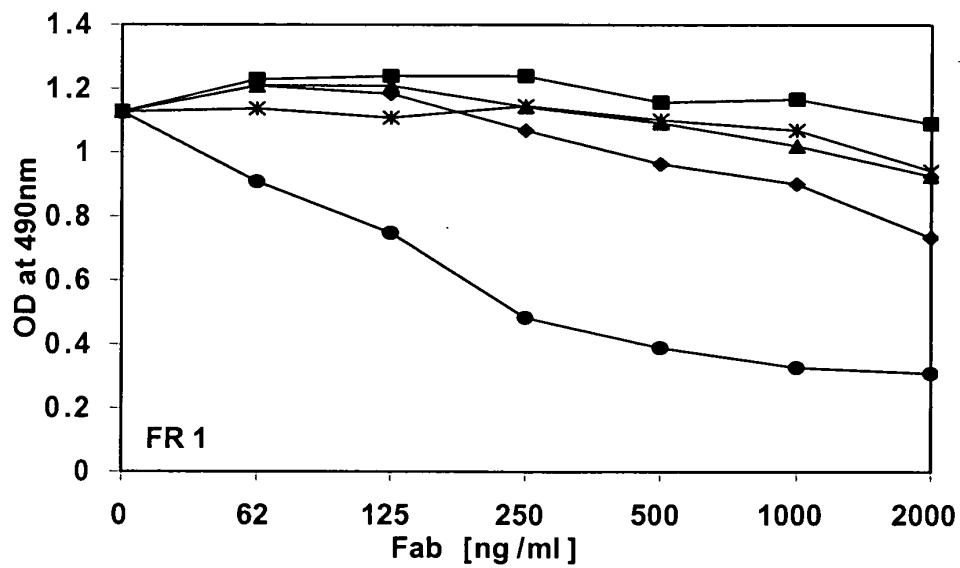


Figure 8A

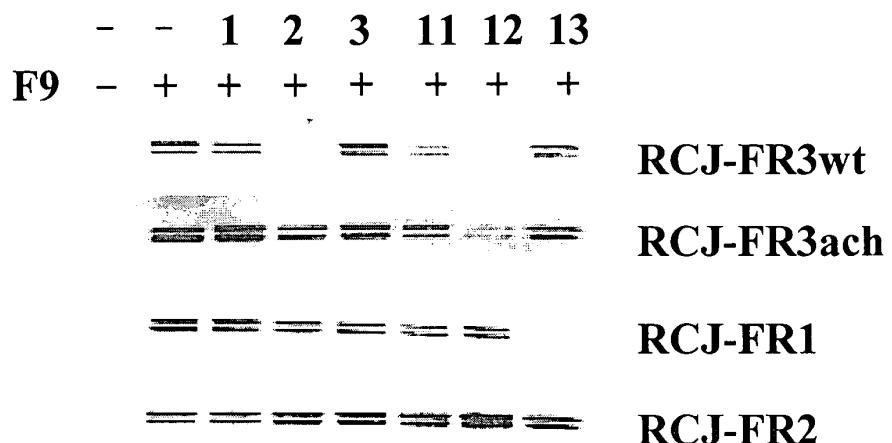


Figure 8B

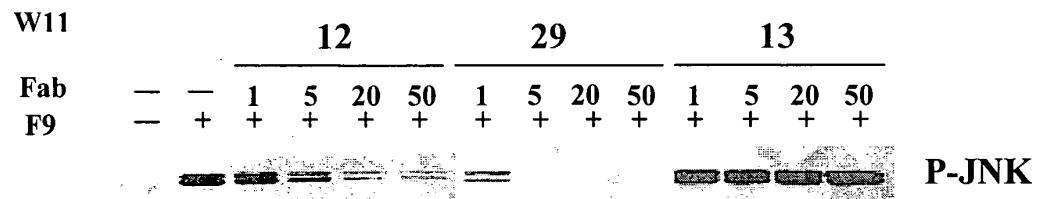


FIGURE 9A

M14

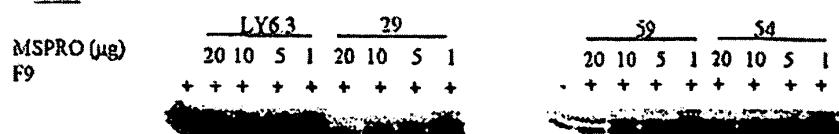


FIGURE 9B

W11

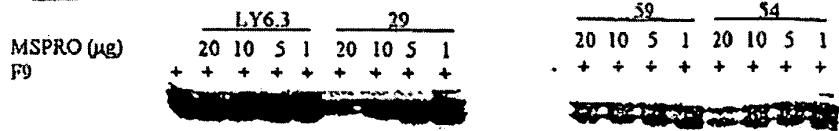


FIGURE 9C

R1-1

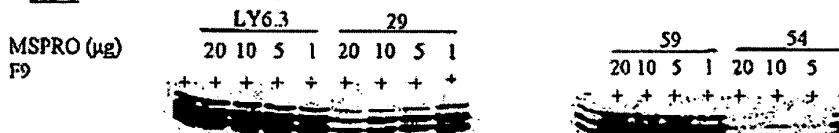


FIGURE 9D

R2-2

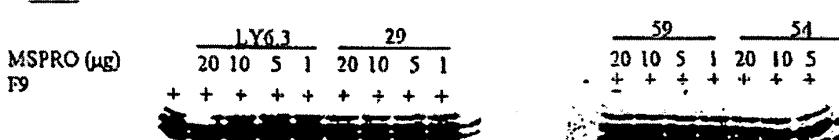


Figure 10

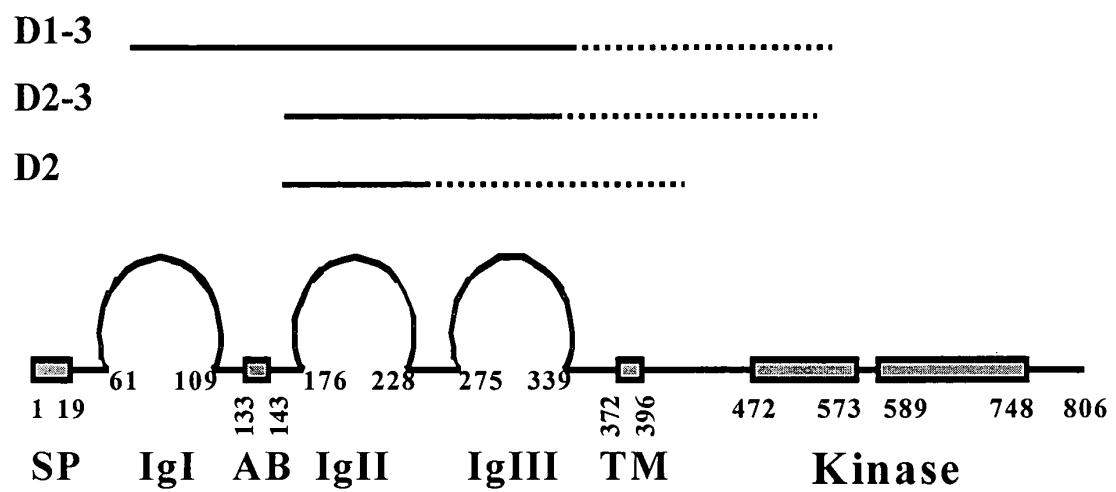


Figure 11

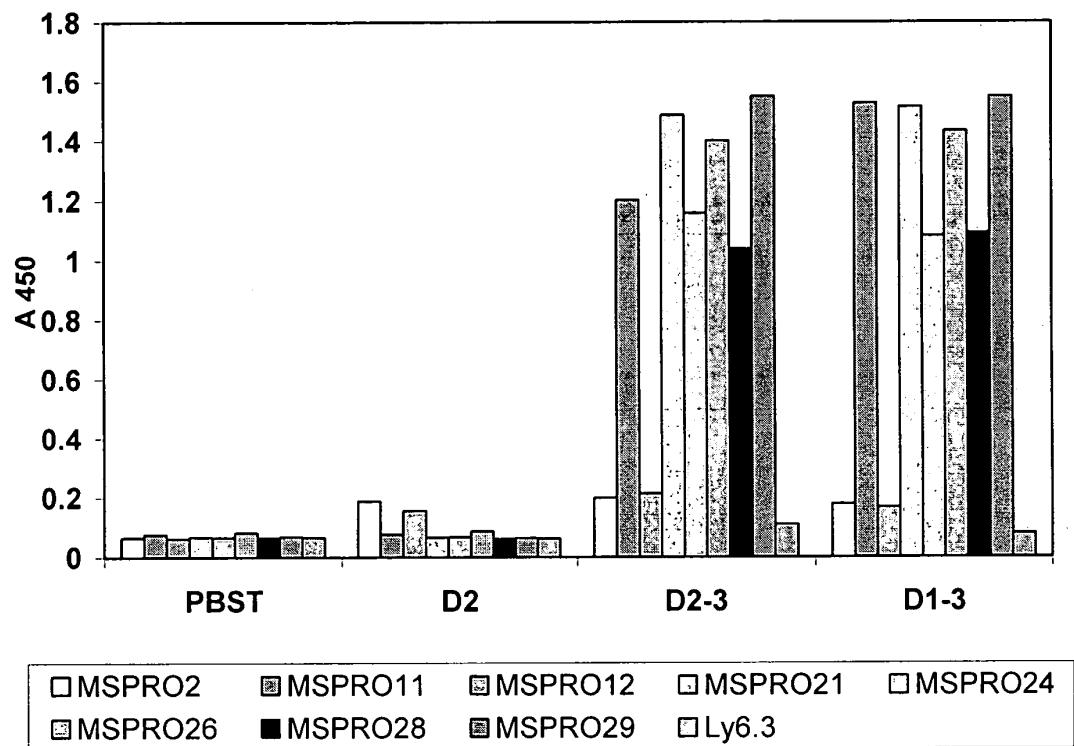


Figure 12

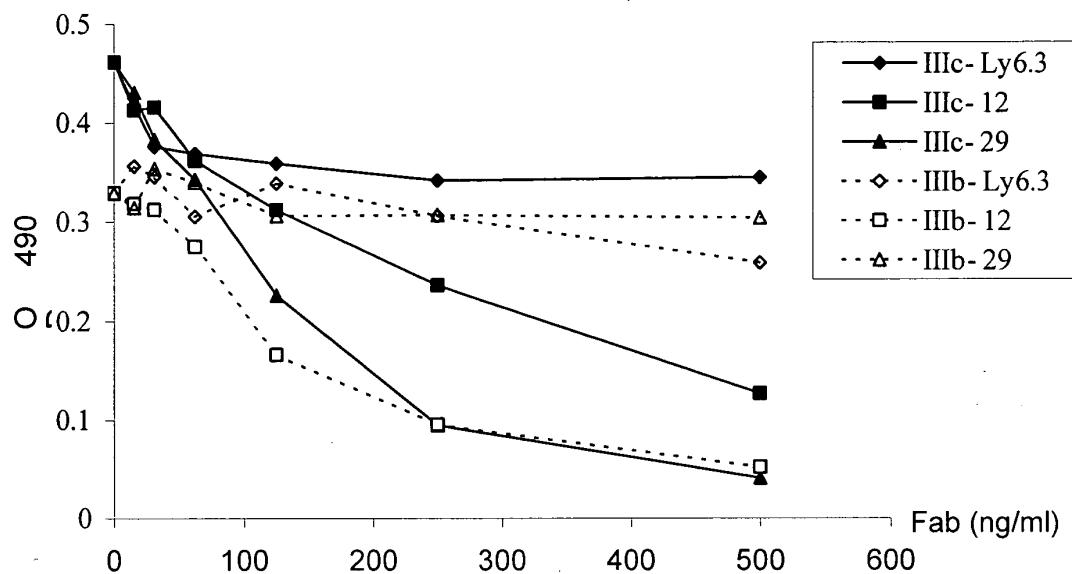


Figure 13A

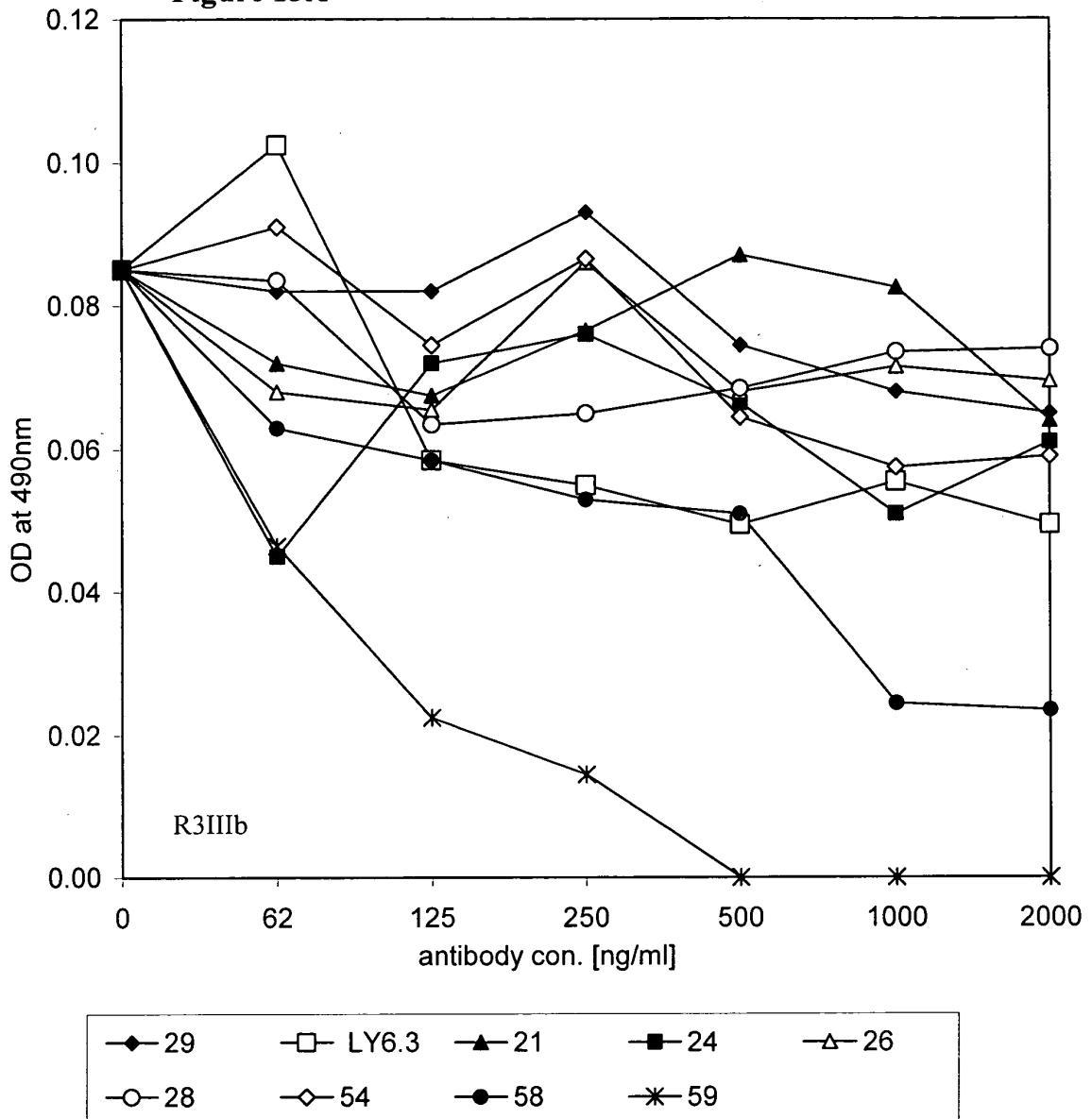


Figure 13B

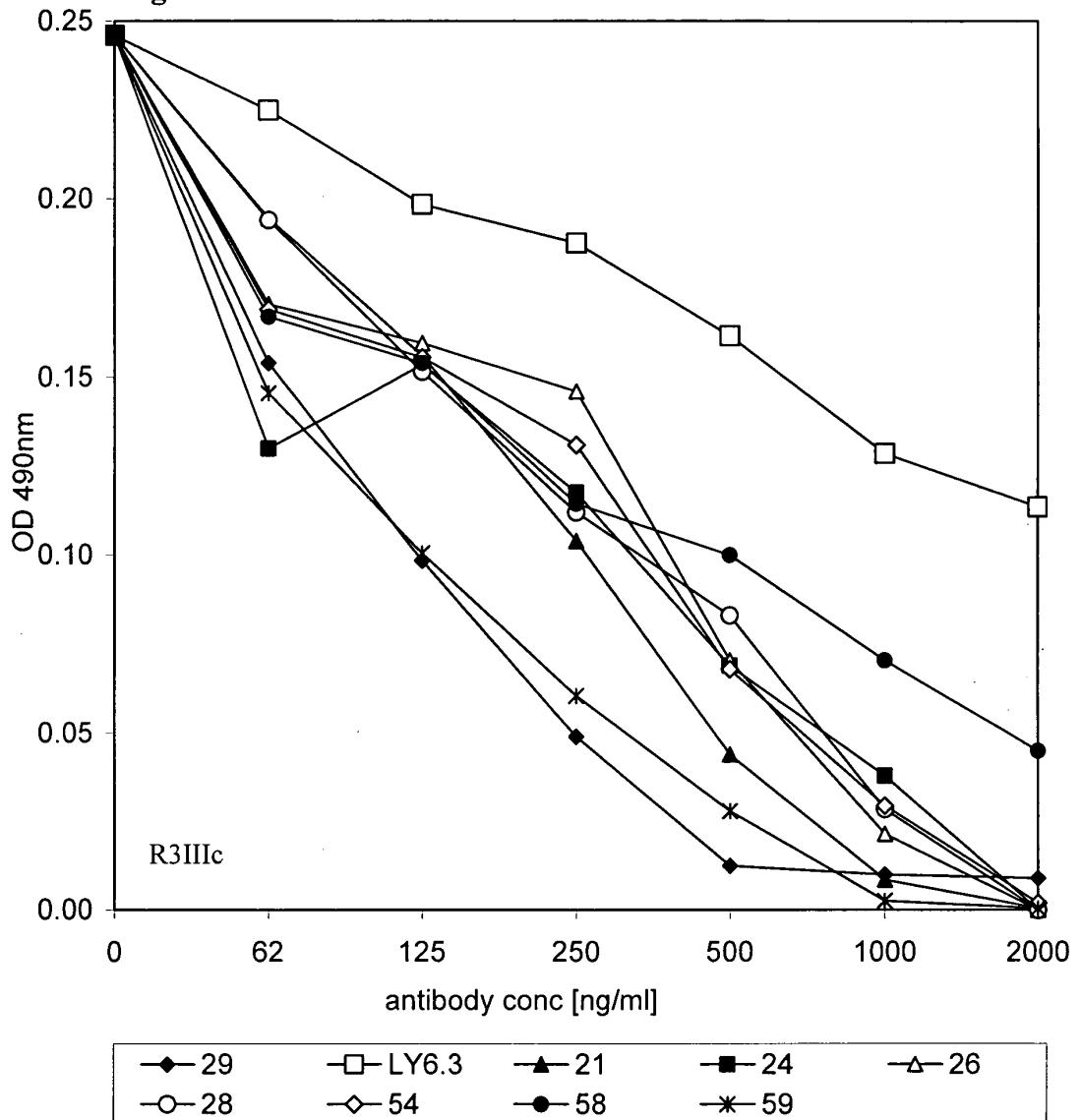


Figure 14

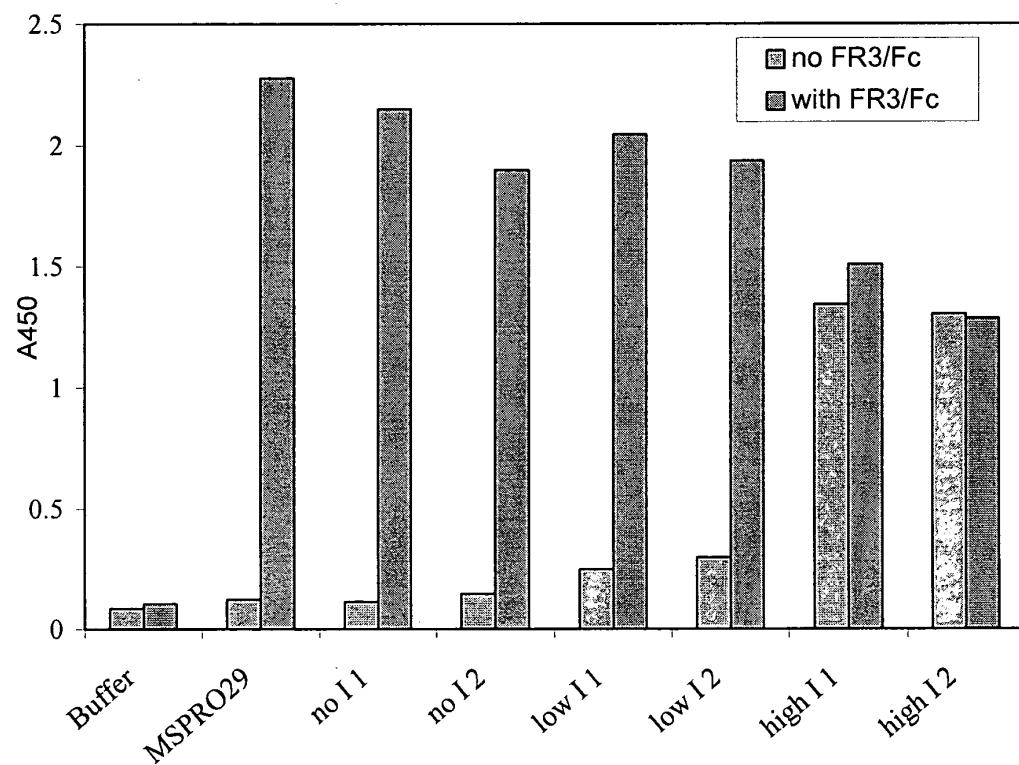
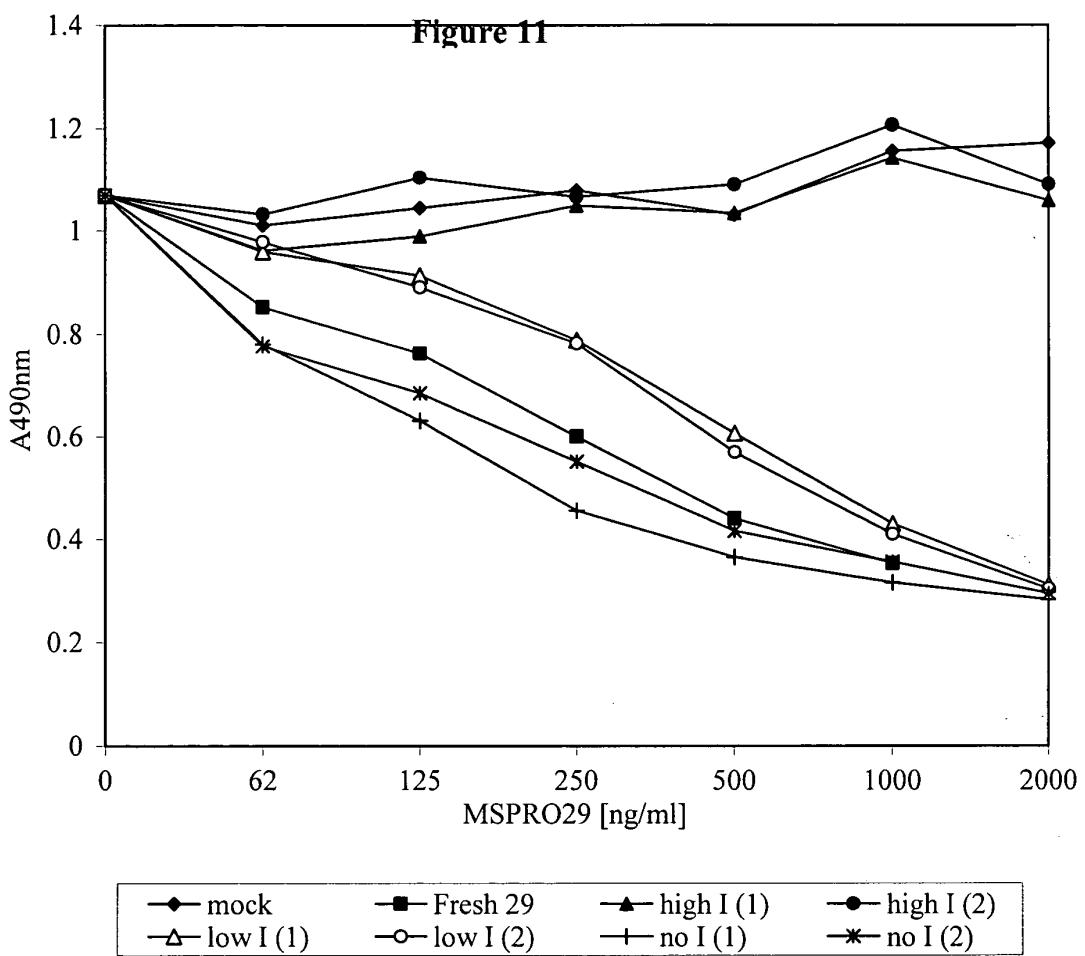


Figure 15



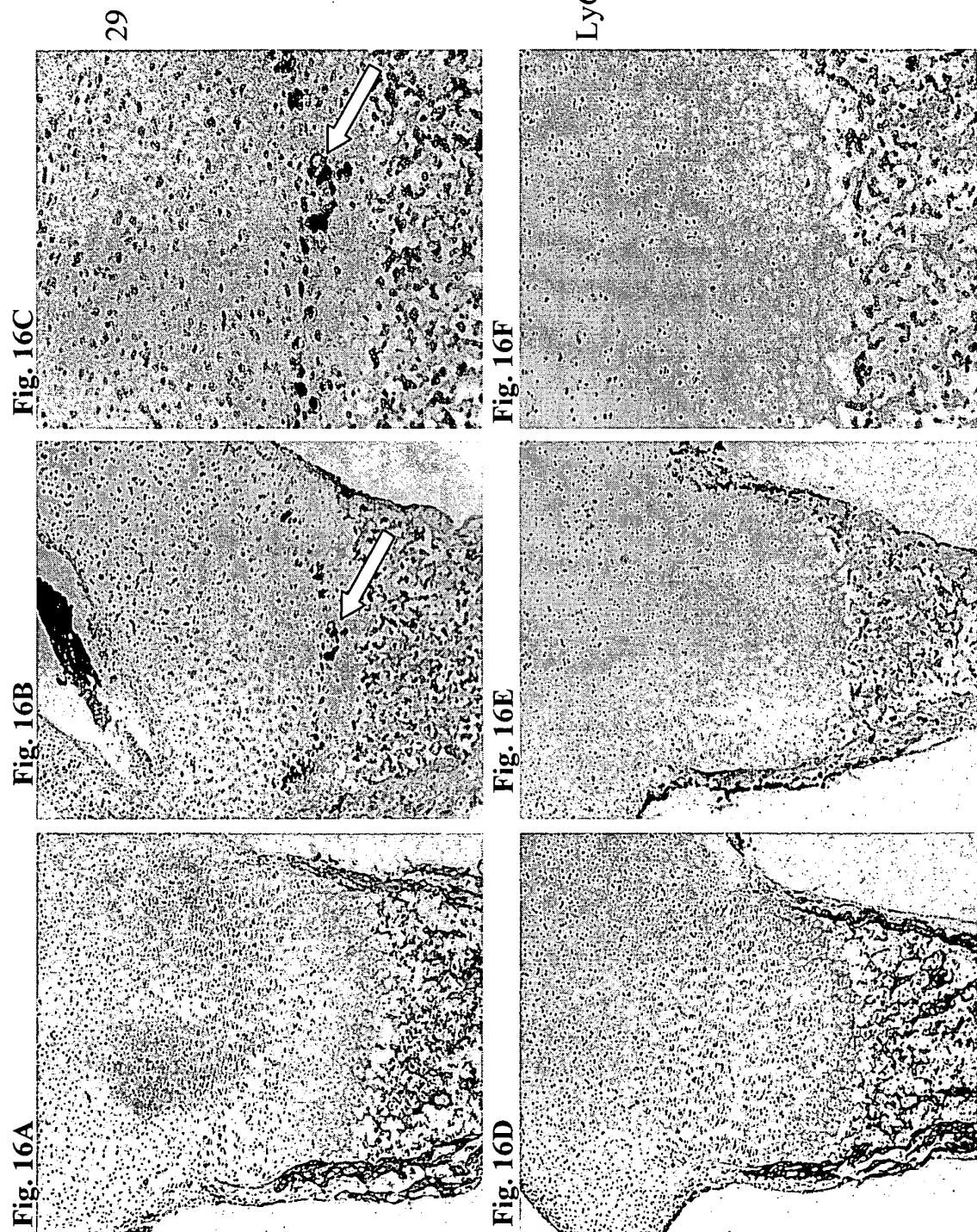


Figure 17A

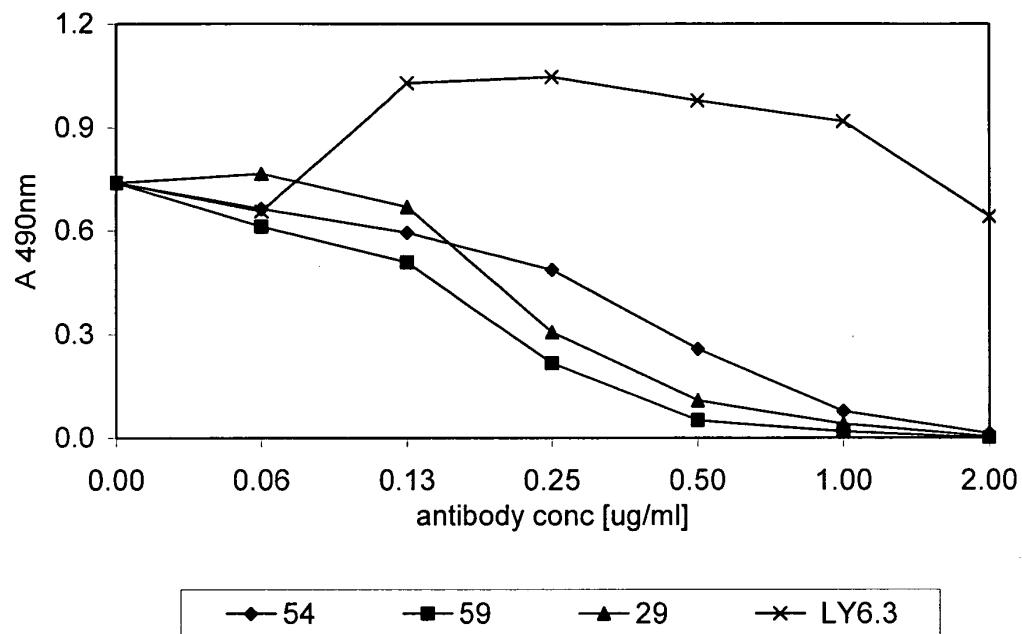


Figure 17B

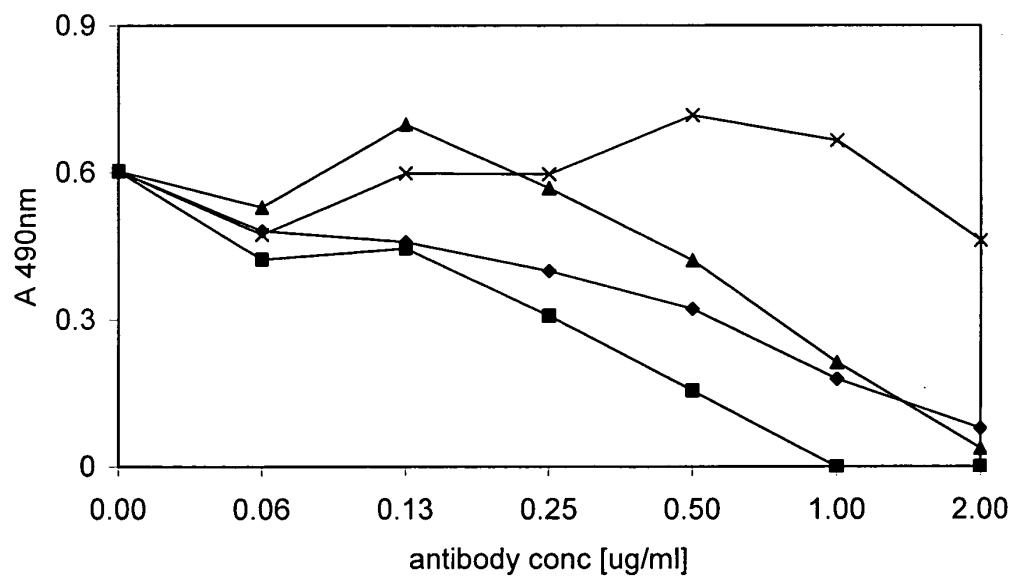


Figure 18A

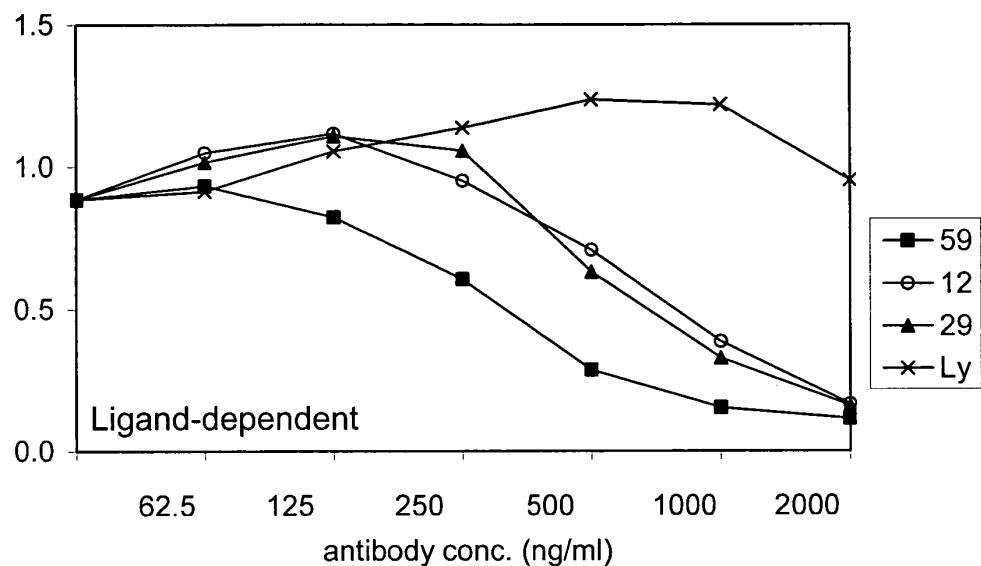


Figure 18B

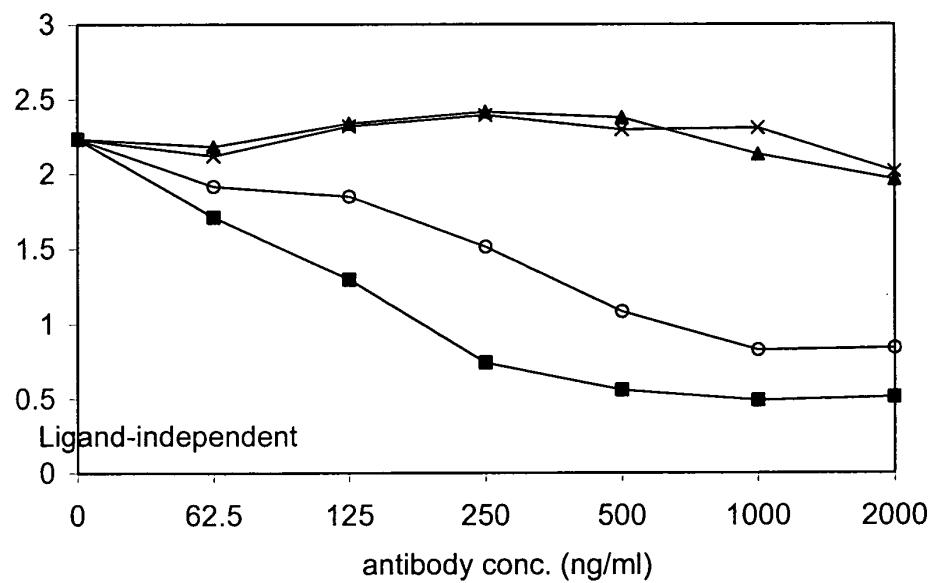


Figure 19

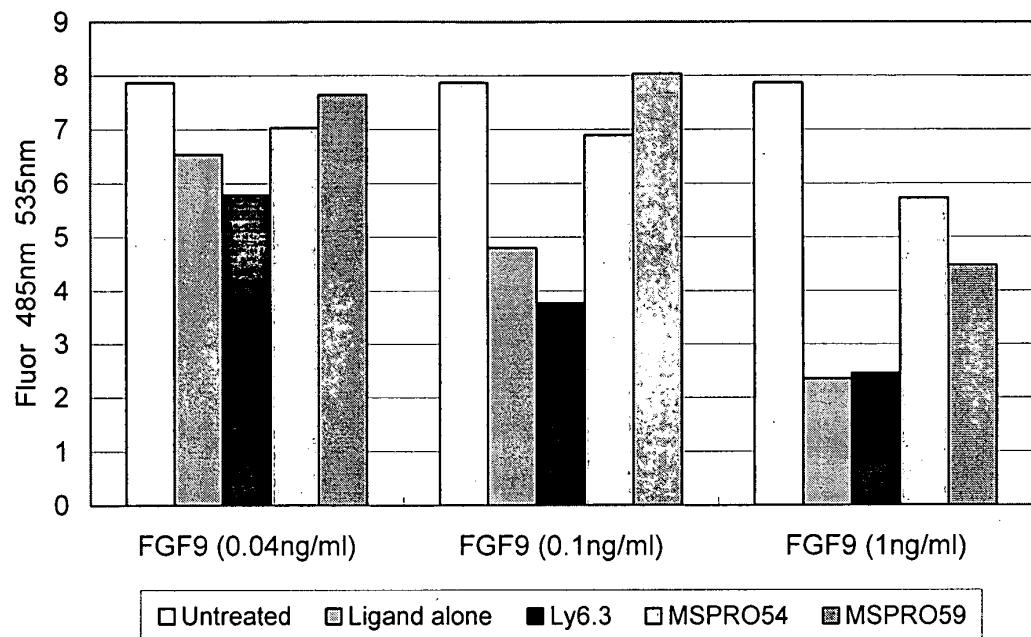


Figure 20

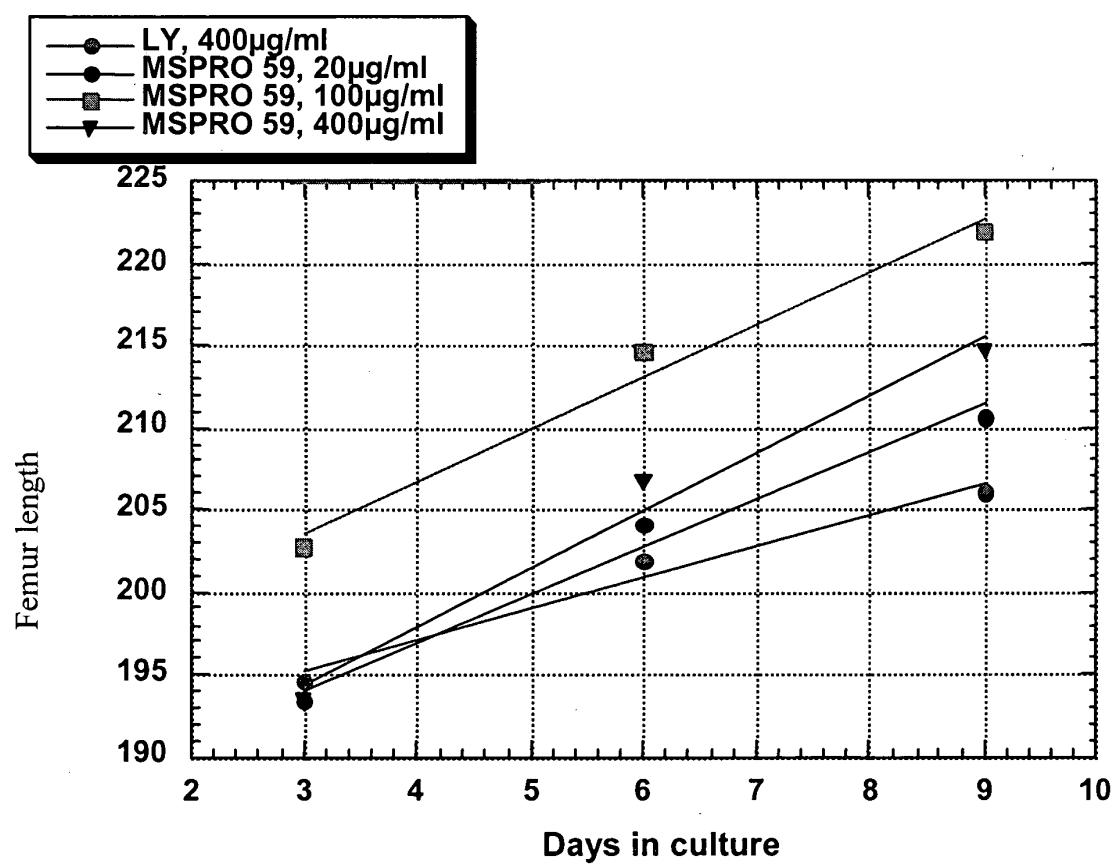


Figure 21

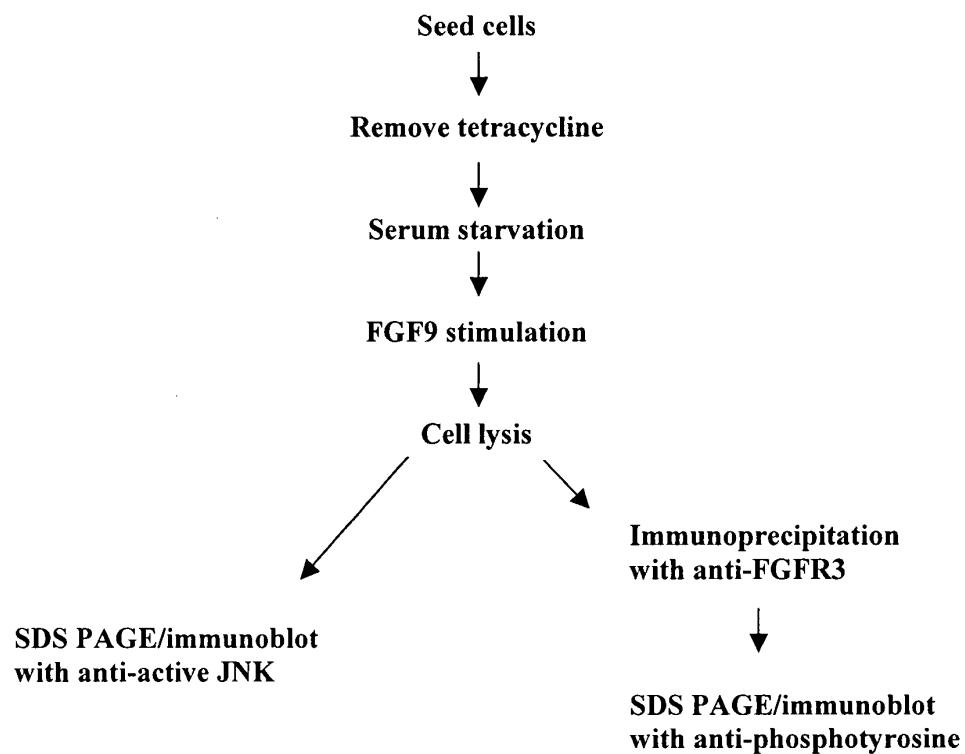


Figure 22

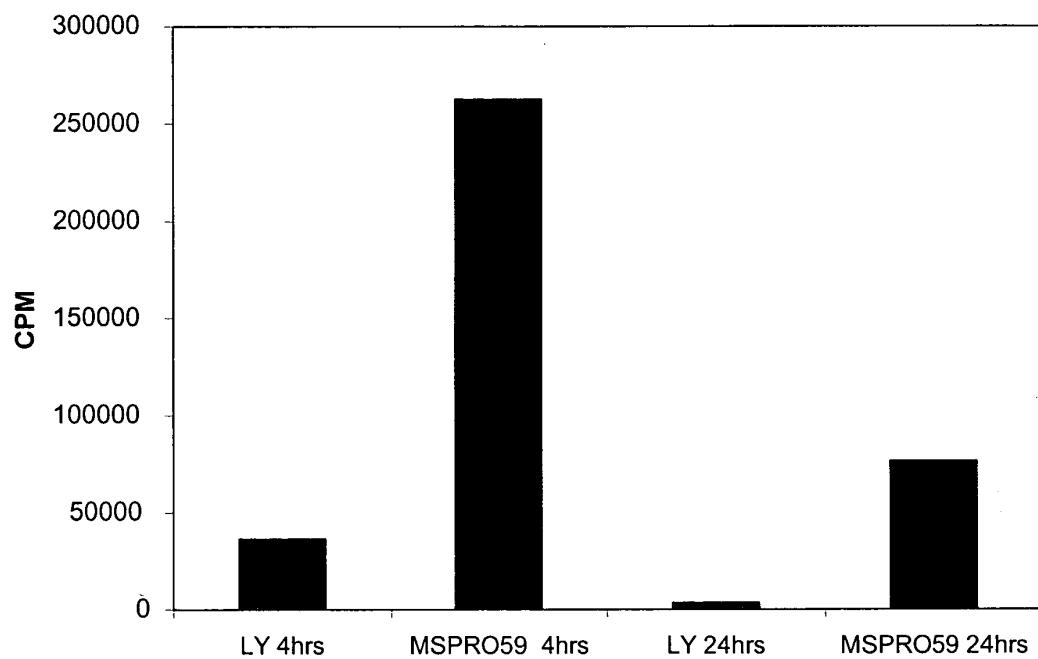


Figure 23

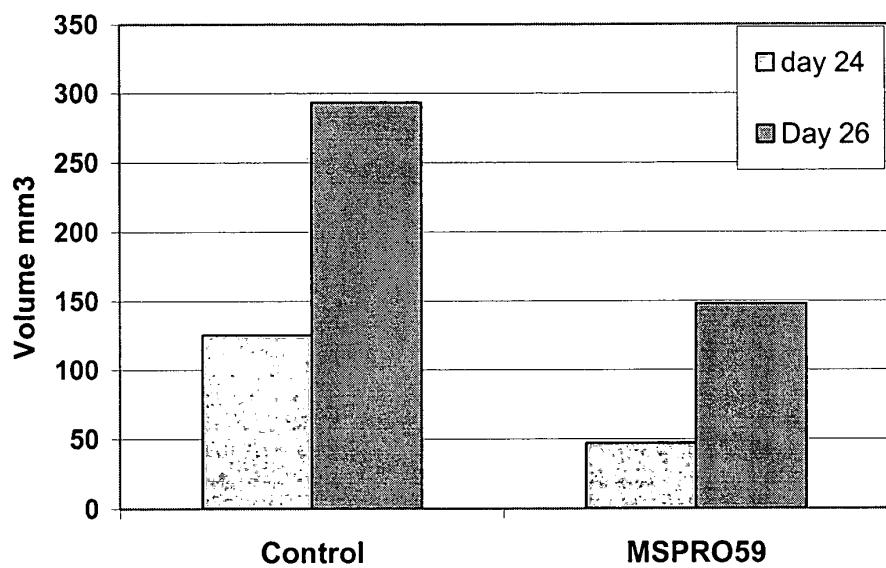


Figure 24

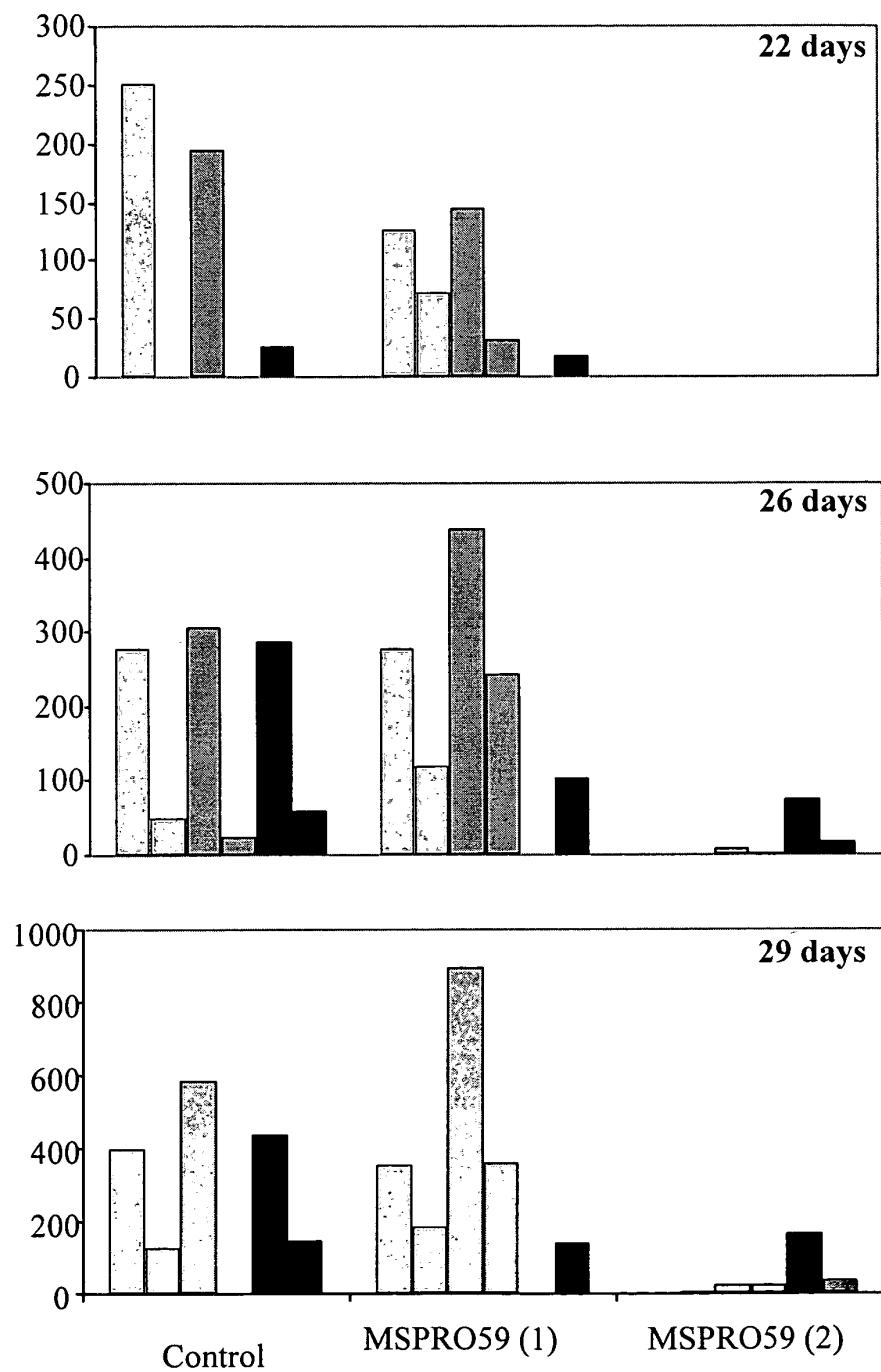


Figure 25A

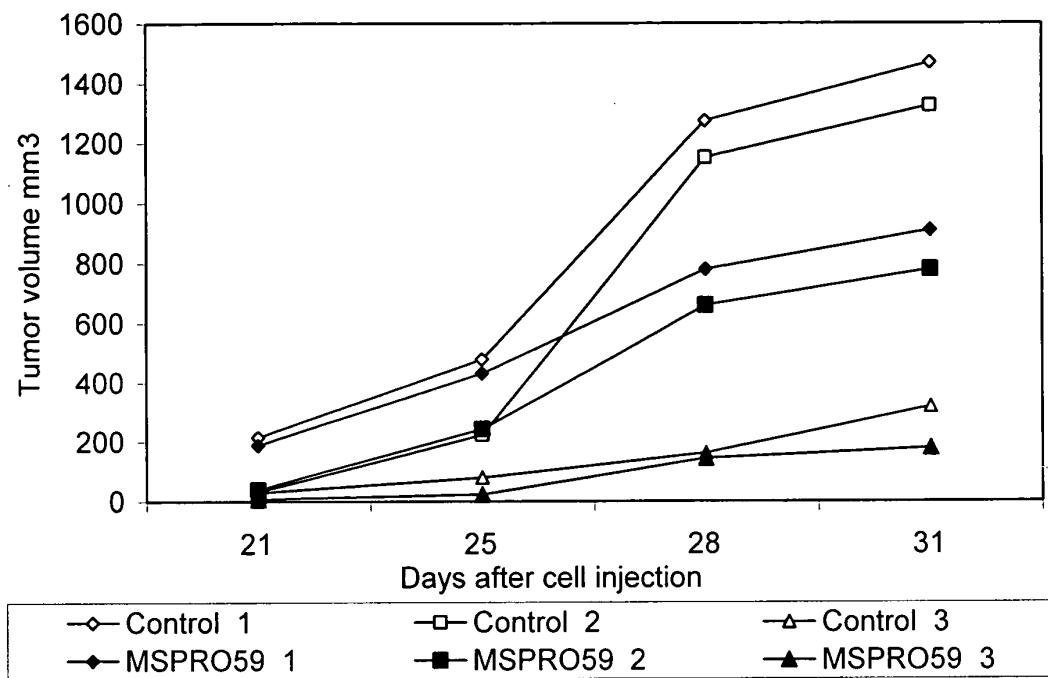


Figure 25B

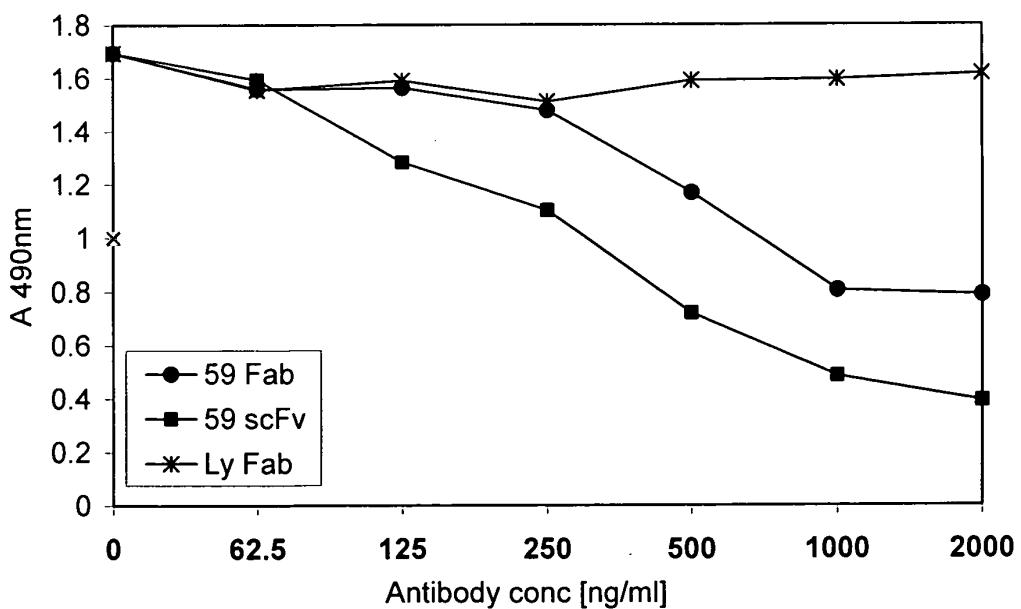


Figure 26

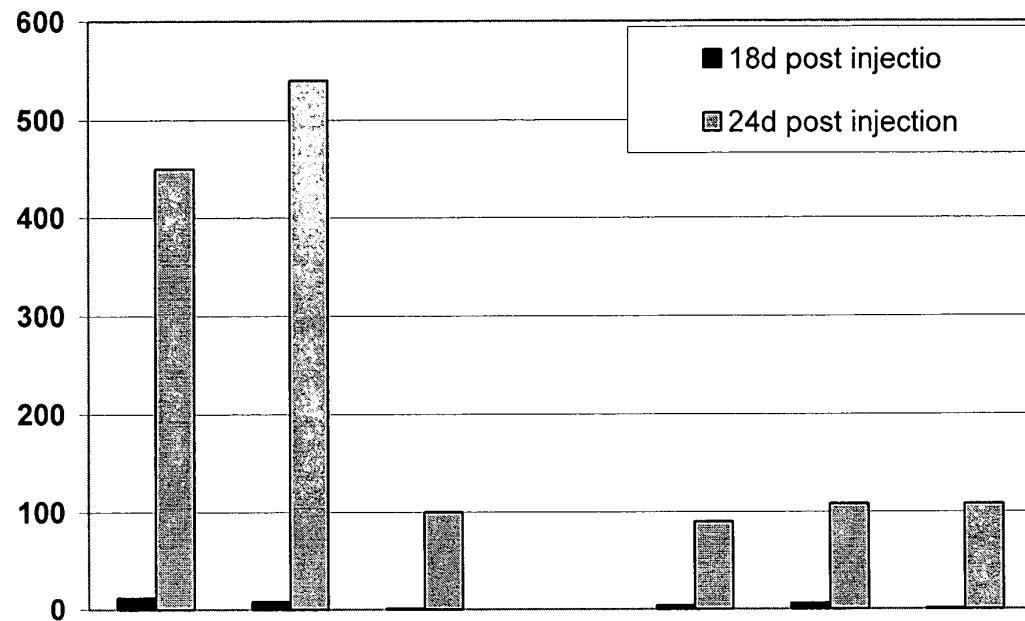


Figure 27

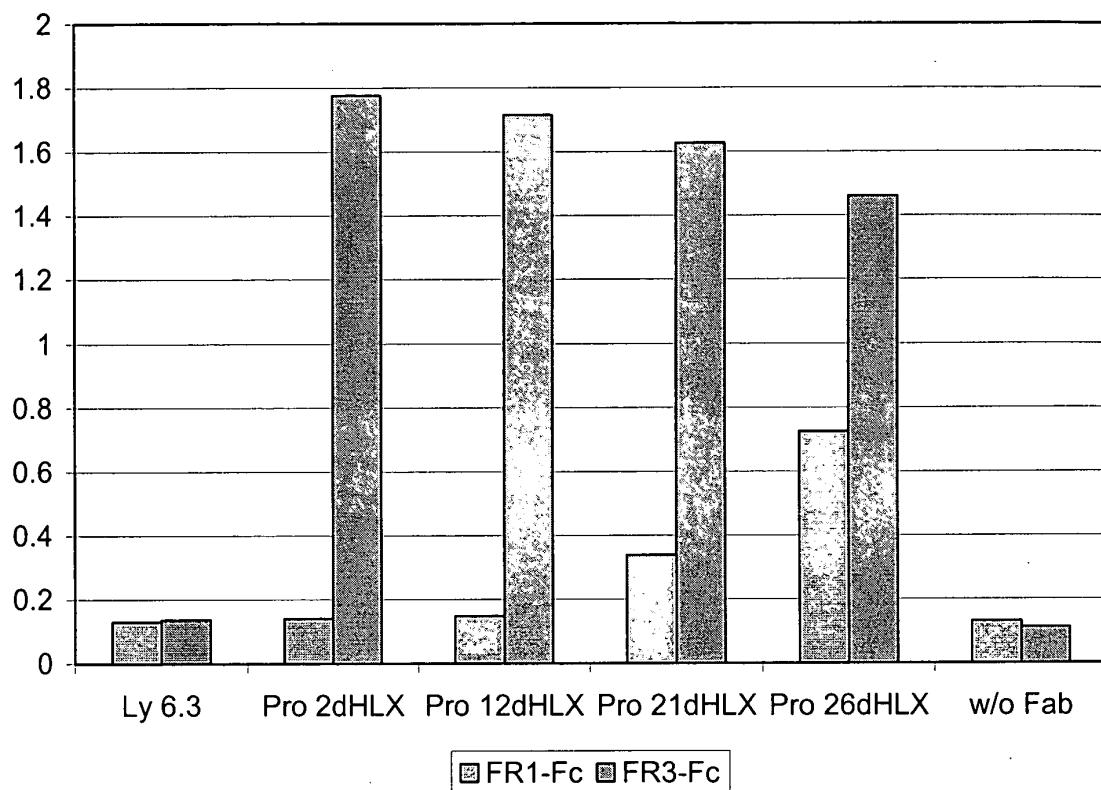


Figure 28

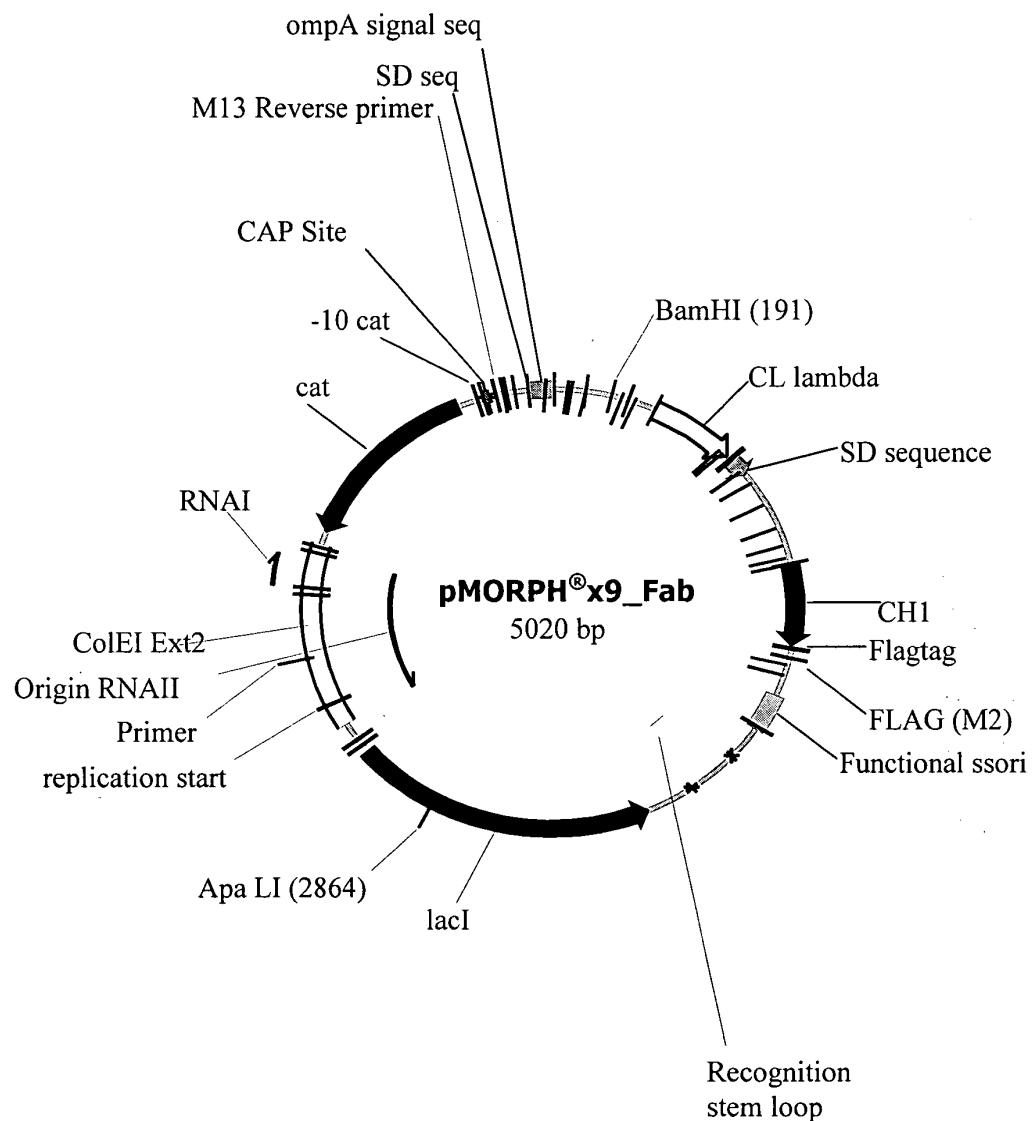


Figure 29

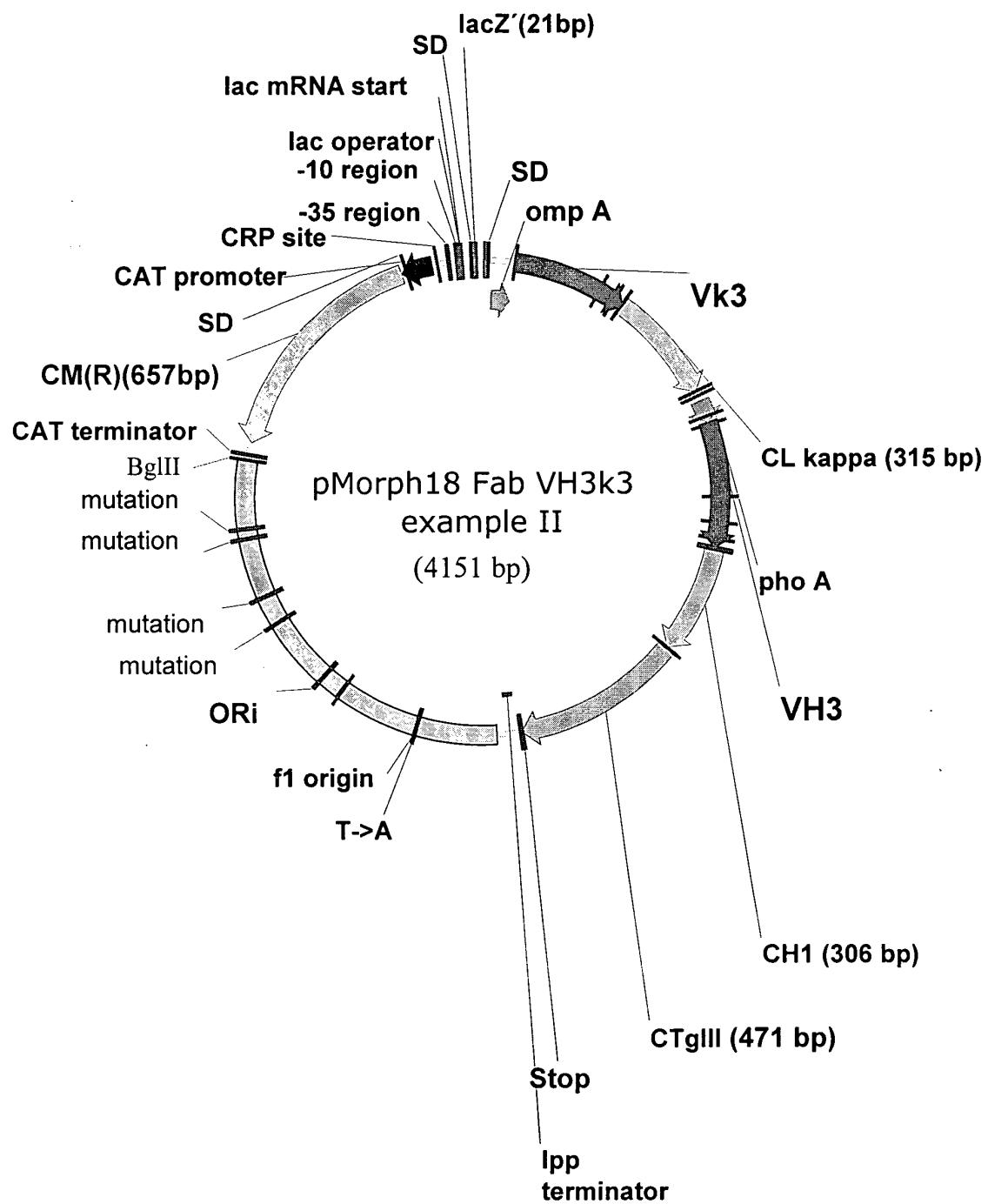


Figure 30

Position	VJL	Ec0RV								Framework 1									
		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8
VJL1 (SEQ ID NO: 61)		GAT	ATC	CAG	ATG	ACC	CAG	AGC	TCT	AGC	GGC	AGC	GTG	GGT	GAT	CGT			
MSPro28 (SEQ ID NO: 62)		GAT	ATC	CAG	ATG	ACC	CAG	AGC	TCT	AGC	GGC	AGC	GTG	GGT	GAT	CGT			
VJL3 (SEQ ID NO: 63)		GAT	ATC	GTG	CTG	ACC	CAG	AGC	TCT	AGC	GGC	AGC	CTG	TCT	CGG	GAA	CGT		
MSPro24 (SEQ ID NO: 64)		GAT	ATC	GTG	CTG	ACC	CAG	AGC	TCT	AGC	GGC	AGC	CTG	TCT	CGG	GAA	CGT		
MSPro29 (SEQ ID NO: 65)		GAT	ATC	GTG	CTG	ACC	CAG	AGC	TCT	AGC	GGG	AGC	CTG	TCT	CGG	GAA	CGT		
VJL4 (SEQ ID NO: 66)		GAT	ATC	GTG	ATG	ACC	CAG	AGC	TCT	AGC	GGG	AGC	CTG	TCT	GGC	GAA	CGT		
MSPro21 (SEQ ID NO: 67)		GAT	ATC	GTG	ATG	ACC	CAG	AGC	TCT	AGC	GGG	AGC	CTG	TCT	GGC	GAA	CGT		
VJL12 (SEQ ID NO: 68)		GAT	ATC	GCA	CTG	ACC	CAG	AGC	TCT	AGC	GGG	TC	TCA	CCA	GGT	CAG	AGC		
MSPro55 (SEQ ID NO: 69)		GAT	ATC	GCA	CTG	ACC	CAG	AGC	TCT	AGC	GGC	TCA	CCA	GGT	CAG	AGC			
MSPro11 (SEQ ID NO: 70)		GAT	ATC	GCA	CTG	ACC	CAG	AGC	TCT	AGC	GGC	TCA	CCA	GGT	CAG	AGC			
MSPro26 (SEQ ID NO: 71)		GAT	ATC	GCA	CTG	ACC	CAG	AGC	TCT	AGC	GGC	TCA	CCA	GGT	CAG	AGC			
VJL13 (SEQ ID NO: 72)		GAT	ATC	GTA	CTG	ACC	CAG	CCG	CCT	.	TCA	GTG	AGC	GTT	GCA	CCA	GGT	CAG	ACC
MSPro54 (SEQ ID NO: 73)		GAT	ATC	GTA	CTG	ACC	CAG	CCG	CCT	.	TCA	GTG	AGC	GTT	GCA	CCA	GGT	CAG	ACC
MSPro2 (SEQ ID NO: 74)		GAT	ATC	GTA	CTG	ACC	CAG	CCG	CCT	.	TCA	GTG	AGC	GTT	GCA	CCA	GGT	CAG	ACC
MSPro12 (SEQ ID NO: 75)		GAT	ATC	GTA	CTG	ACC	CAG	CCG	CCT	.	TCA	GTG	AGC	GTT	GCA	CCA	GGT	CAG	ACC
MSPro59 (SEQ ID NO: 76)		GAT	ATC	GTA	CTG	ACC	CAG	CCG	CCT	.	TCA	GTG	AGC	GTT	GCA	CCA	GGT	CAG	ACC
VH	Position	MfeI								Framework 1									
		1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8
VH1A (SEQ ID NO: 77)		GAA	/CAC	GTG	CAA	TTG	GTT	CAG	TCT	GGC	GGG	GAA	GTG	AAA	AAA	CCG	GGC	AGC	AGC
MSPro21 (SEQ ID NO: 78)		CAG	GTG	CAA	TTG	GTT	CAG	TCT	GGC	GCG	GAA	GTG	AAA	AAA	CCG	GGC	AGC	AGC	GTG
MSPro24 (SEQ ID NO: 79)		CAG	GTG	CAA	TTG	GTT	CAG	TCT	GGC	GCG	GAA	GTG	AAA	AAA	CCG	GGC	AGC	AGC	GTG
MSPro28 (SEQ ID NO: 80)		CAG	GTG	CAA	TTG	GTT	CAG	TCT	GGC	GCG	GAA	GTG	AAA	AAA	CCG	GGC	AGC	AGC	GTG
VH1B (SEQ ID NO: 81)		GAA	/CAC	GTG	CAA	TTG	GTT	CAG	AGC	GGC	GCG	GAA	GTG	AAA	AAA	CCG	GGC	GGG	AGC
MSPro54 (SEQ ID NO: 82)		CAG	GTG	CAA	TTG	GTT	CAG	AGC	GGC	GCG	GAA	GTG	AAA	AAA	CCG	GGC	GCG	AGC	GTG
MSPro55 (SEQ ID NO: 83)		CAG	GTG	CAA	TTG	GTT	CAG	AGC	GGC	GCG	GAA	GTG	AAA	AAA	CCG	GGC	GCG	AGC	GTG
MSPro2 (SEQ ID NO: 84)		CAG	GTG	CAA	TTG	GTT	CAG	AGC	GGC	GCG	GAA	GTG	AAA	AAA	CCG	GGC	GCG	AGC	GTG
MSPro11 (SEQ ID NO: 85)		CAG	GTG	CAA	TTG	GTT	CAG	AGC	GGC	GCG	GAA	GTG	AAA	AAA	CCG	GGC	GCG	AGC	GTG
MSPro26 (SEQ ID NO: 86)		CAG	GTG	CIA	TTG	GTT	CAG	AGC	GGC	GCG	GAA	GTG	AAA	AAA	CCG	GGC	GCG	AGC	GTG
MSPro29 (SEQ ID NO: 87)		CAG	GTG	CIA	TTG	GTT	CAG	AGC	GGC	GCG	GAA	GTG	AAA	AAA	CCG	GGC	GCG	AGC	GTG
VH2 (SEQ ID NO: 88)		GAA	/CAC	GTG	CIA	TTG	AIA	GAA	AGC	GGC	GGG	CCT	GTG	AAA	CCG	ACC	CAA	ACC	CTG
MSPro12 (SEQ ID NO: 89)		CAG	GTG	CIA	TTG	AIA	GAA	AGC	GGC	GGG	CCT	GTG	AAA	CCG	ACC	CAA	ACC	CTG	
VH6 (SEQ ID NO: 90)		GAA	/CAC	GTG	CIA	TTG	CAG	TCT	GGT	CCG	GGG	CTG	GTG	AAA	CCG	AGC	CAA	ACC	CTG
MSPro59 (SEQ ID NO: 91)		CAG	GTG	CIA	TTG	CAG	TCT	GGT	CCG	GGC	CTG	GTG	AAA	CCG	AGC	CAA	ACC	CTG	

Figure 30 cont.

j	k	CDR3			Framework 4						BpI						
		1	2	3	4	5	6	7	8	9	0						
x	x	x	GAT	x	TGG	GCC	CAA	GGC	ACC	CTG	GTG	ACG	GTT	AGC	TCA	GC	
CCT	TCT	TCT	GAT	GAT	TGG	GCC	CAA	GGC	ACC	CTG	GTG	ACG	GTT	AGC	TCA	GC	
TAT	ACT	TCT	TCT	GAT	TAT	TGG	GCC	CAA	GGC	ACC	CTG	GTG	ACG	GTT	AGC	TCA	GC
TAT	CTT	TTT	GAT	TCT	TGG	GCC	CAA	GGC	ACC	CTG	GTG	ACG	GTT	AGC	TCA	GC	
x	x	x	GAT	x	TGG	GCC	CAA	GGC	ACC	CTG	GTG	ACG	GTT	AGC	TCA	GC	
CCT	CAT	TTT	GAT	TAT	TGG	GCC	CAA	GGC	ACC	CTG	GTG	ACG	GTT	AGC	TCA	GC	
GTT	CCT	TTT	GAT	CAT	TGG	GCC	CAA	GGC	ACC	CTG	GTG	ACG	GTT	AGC	TCA	GC	
TAT	GAG	TTT	GAT	TAT	TGG	GCC	CAA	GGC	ACC	CTG	GTG	ACG	GTT	AGC	TCA	GC	
GGT	TTT	ATT	GAT	TAT	TGG	GCC	CAA	GGC	ACC	CTG	GTG	ACG	GTT	AGC	TCA	GC	
GGT	TAT	TTT	GAT	AAT	TGG	GCC	CAA	GGC	ACC	CTG	GTG	ACG	GTT	AGC	TCA	GC	
TAT	TAT	TTT	GAT	ATT	TGG	GCC	CAA	GGC	ACC	CTG	GTG	ACG	GTT	AGC	TCA	GC	
x	x	x	GAT	x	TGG	GCC	CAA	GGC	ACC	CTG	GTG	ACG	GTT	AGC	TCA	GC	
TAT	ATG	TTT	GAT	TAT	TGG	GCC	CAA	GGC	ACC	CTG	GTG	ACG	GTT	AGC	TCA	GC	
x	x	x	GAT	x	TGG	GCC	CAA	GGC	ACC	CTG	GTG	ACG	GTT	AGC	TCA	GC	
CCT	GAT	TTT	GAT	TAT	TGG	GCC	CAA	GGC	ACC	CTG	GTG	ACG	GTT	AGC	TCA	GC	